Glossary

access streets: the lowest order street in the hierarchy of streets, it conducts traffic between individual dwelling units and higher order streets (such as collector and sub-collector streets. Access streets convey the lowest traffic volume, and are prime candidates for reduced street widths.

arterial street: a street that provides a direct route for long distance travel within a region and to different parts of the city. Traffic on an arterial street is given preference at intersections, and some access control may be considered un order to maintain capacity to carry high volumes of traffic. No residences are allowed on busy arterial streets

average daily traffic (ADT): the average total number of vehicles that traverse a road or highway on a typical day. Often used to classify and design roadway systems.

basin: the largest single watershed management unit for water planning, that combines the drainage of a series of sub-basins. Often have a total area more than a thousand square miles.

bioretention: a technique that uses parking lot islands, planting strips, or swales to collect and filter urban stormwater, that includes grass and sand filters, loamy soils, mulch, shallow ponding and native trees and shrubs.

buffer: an area adjacent to a shoreline, wetland or stream where development is restricted or prohibited.

buffer averaging: a technique for delineating the width of the buffer such that buffer boundary can be narrower at some points along the stream as long its average width meets the minimum criteria. buffer averaging allows for greater flexibility to allow for existing structures or planned lots without destroying the integrity of the buffer network.

buffer expansion: an increase in the base width of the stream buffer to incorporate floodplains, steep slopes and adjacent wetlands, or to protect higher order streams and rivers .

bufferyard: landscaped areas located on the outer perimeter of a lot or parcel that are used to screen or separate different land uses or zones.

building footprint: term used to describe the area that a building covers.

catchment: the smallest watershed management unit, defined as the area of a development site to its first intersection with a stream, usually as a pipe or open channel outfall.

cluster: a development pattern that arranges the layout of buildings on a compact area of the site so as to reserve a portion of the site for common open space or green space that is protected in perpetuity (see also stream protection cluster).

collector street: acts as the primary traffic route within a residential or commercial area, and funnels a high traffic volume from a busy arterial street into lower order streets (access and sub-collectors).

cul-de-sac: a circular section located at the end of an access street that permits vehicles to turnaround.

curbs: a concrete barrier on the margin of a road or street that is used to direct stormwater runoff to an inlet, protect pavement edges, and protect lawns and sidewalks from encroachment by vehicles.

degrading subwatershed: urban stream classification for a subwatershed with 11 to 25% ultimate impervious cover. Urbanization is expected to lead to some degradation in stream quality.

density: the number of dwelling units per gross acre for residential and commercial uses.

density compensation: granting a credit for higher density elsewhere on a site to compensate for developable land due to stream buffer requirements.

drainage channel: a designed channel used to convey stormwater runoff that may be lined with grass, rip-rap, or concrete, and has a cross sectional capacity that can accommodate the peak discharge associated with a 10 or 25 year design storm event. Seldom provides reliable pollutant removal.

drainage density: the length of stream channels per unit area in the landscape.

dwelling unit: a room or group of rooms within a structure that provides living quarters for a single family.

excess parking: parking spaces that are constructed over and above the number required or predicted based on the parking demand ratio for a particular land use or activity

full density transfer cluster (FDT): the least restrictive form of clustering to reduce impervious cover at a development site. In this option, gross site density is equal to net site density, so that designer can increase density in one portion of the development to compensate for loss of land rendered unbuildable due to wetland, floodplain, stream buffer, steep slopes or other environmental requirements. The FDT option helps to reduce impervious cover, but is primarily intended to support stream buffer and other requirements.

filter strips: a vegetated area that treats sheetflow and/or interflow from croplands to remove sediment and other pollutants. May be grass or forest. May be used to treat shallow concentrated stormflows over very short contributing distances in urban areas.

flag lot: an irregular lot shape that only has enough frontage on the street to provide driveway access. Often used to squeeze in extra lots within a subdivision, they resemble a "flag" since most of the lot is located well away from the street.

floodplain: areas adjacent to a stream or river that are subject to flooding or inundation during a storm event that occurs, on average, once every 100 years.

floor to area ratio: A planning ratio that is derived by dividing the total floor space of a building by the site area. Communities utilize the ratio to restrict the height or form of residential and commercial buildings within a zoning category.

frontage requirements: a requirement in subdivision code that mandates that each lot within a particular zoning category have a

minimum length that faces the street

grassed channel: in this manual, a long, open, and grassed channel used to convey stormwater runoff to a downstream point. It is designed to filter out pollutants during water quality storms, and also convey large storm events.

green space: the proportion of open space in a cluster development that is retained in an undisturbed vegetative condition.

gross density: the maximum number of dwelling units allowed within a particular zoning class, expressed in terms of dwelling units per acre.

gross floor area (gfa): a term that describes the total square footage of office or commercial space within a building, often used to determine parking requirements.

hammerhead: a "T" shaped turnaround option for lightly travelled residential streets Creates less impervious cover compared to a circular cul-de-sac.

headwater stream: a term for the smaller first and second order tributary streams in a drainage network.

intermittent streams: the smallest channels in the stream network that only have running water during a storm event.

impervious cover: any surface in the urban landscape that cannot be effectively absorb or infiltrate rainfall, which may include roads, streets, parking lots, rooftops and sidewalks. Often determined as what is not green at the development site.

imperviousness: the percentage of impervious cover within a development site or watershed.

lot: a parcel of land undivided any street that is occupied one building, and associated open space and yards.

minimum lot size: the minimum area or dimension of an individual lot within a particular zoning category, as specified within a local subdivision code.

net site density: the maximum number of dwelling units in a cluster development, after all unbuildable land areas are subtracted out.

non-supporting subwatershed: Urban stream classification for a subwatershed with more than 25% ultimate impervious cover. As a result of development, poor channel stability, water quality lead to a sharp loss in stream biodiversity.

on-site sewage disposal system (OSDS): a term for a series of method for treating wastewater on a residential site (e.g., by a septic system).

open space: a portion of a cluster development that is set aside for public or private use and is not developed with homes. The space may be use for active or passive recreation, or may be reserved to protect or buffer natural areas (cf green space)

overland flow path: the lateral distance from a high point, ridgetop or watershed divide to a stream or open channel.

parking ratios: expresses the required parking spaces that must be provided for a particular land use, often stated as a ratio of x spaces per y units, which may be square footage of space,

number of dwelling units, persons or seats.

parking stall: the total area needed to accommodate the parking of a single vehicle, extending outward from the curb, and between the stripes.

parking space: the total impervious area created by each parking stall, obtained by dividing the total parking lot area by the number of parking stalls provided. The impervious area created per parking space can be twice as great as the area of an individual parking stall.

partial density transfer cluster option (PDT): the most restrictive cluster option used to reduce impervious cover. In the PDT option, land area considered unbuildable for physical and environmental reasons is subtracted from the gross density allowed from the site to arrive at a net site density. Thus, the allowable number of lots is reduced, and the developer is not compensated for them. This option results in the greatest reduction of impervious cover.

performance standards: technical standards that govern the development process that are based on meeting general objectives for design, rather than prescribing rigid, uniform and detailed design requirements.

perennial streams: a stream channel that has running water throughout the year.

pervious cover: A vegetated area of the urban landscape where rainfall is intercepted by vegetation, and infiltrates into soil or a humus layer.

sensitive subwatershed: urban stream classification for a subwatershed with less than 10% impervious cover, that is still capable of supporting stable channels and good to excellent biodiversity

shared parking: a parking strategy designed to reduce the total number of parking spaces needed within an area, by allowing adjacent users to share parking areas during noncompeting hours of operation (e.g., a shared lot for a theater and an office building).

sheetflow: a flow condition during a storm where the depth of stormwater runoff is very shallow in depth and spread uniformly over the land surface. This sheet flow quickly changes into concentrated channel flow within several hundred feet.

steep slope: an area of a development site that is too steep to (a) safely build on or (b) has a high potential for severe soil erosion during construction.

stream buffer: a variable width buffer located along both sides of the stream.

stream protection cluster: a form of cluster development that is explicitly designed to minimize impervious cover and protect green space.

stream order: a method of classifying streams according to their relative position in the stream network. A stream that has no tributaries or branches is considered a first order stream. When two first order streams combine together, they form a second order stream, and so on.

sub-basin: A term for a large watershed management unit (100 to 1000 square miles) that combines the drainage area from a number

of watersheds together, usually draining to a specific receiving water such as a lake, estuary or river.

subdivision: a new development that splits an existing tract, parcel or lot into two or more parts.

subdivision code: a set of local requirements that govern the geometric dimensions of a particular zoning category, and also specify the nature of roads, drainage, waste disposal and other community services that must be constructed to serve the development.

subwatershed: a watershed management unit whose boundaries are typically defined as all of the land draining to the point where two second order streams combine together to form a third order stream. A subwatershed may be a few square miles in area, and are the key geographic unit for urban stream classification. and watershed- based zoning.

swale: in this guide, it refers to an open drainage channel that has been explicitly designed to detain or infiltrate the entire runoff volume associated with a water quality storm event. A *dry swale* is designed to promote infiltration, a *wet swale* has standing water due to the fact that the channel is excavated below the water table.

trip generation rate: a statistic that indicates the number of vehicular trips that are taken from an average dwelling unit in a particular land use category on a typical day. For example, studies have shown that one single family home generates about 10 trips per day.

unbuildable lands: the portions of a development site where structures cannot be located for physical or environmental reasons. (e.g., easements, open water, steep slopes, floodplains, wetlands and stream buffers). used to compute net density in cluster developments.

urban vegetative treatment system: the use of the outer and middle zone of the stream buffer to treat stormwater runoff from adjacent pervious or impervious surfaces.

watershed based zoning: an alternative zoning technique, whereby the intensity of development within a watershed or subwatershed is at least partially based on the ultimate percentage of impervious cover, and the desired level of stream protection.

zero-lot line: the location of a structure on a lot in such a manner that one or more sides of the structure rests directly on a lot line.

zoning: a set of regulations and requirements that govern the use, placement, spacing and size of buildings and lots within a specific area or in a common class (zone).